

Untitled.ST25
SEQUENCE LISTING

<110> University of Manitoba
Her Majesty the Queen in Right of Canada as Represented by
the Minister of Health

<120> SARS-RELATED PROTEINS

<130> 85084-1003

<150> US 60/462688

<151> 2003-04-15

<150> US 60/472416

<151> 2003-05-22

<160> 2

<170> PatentIn version 3.2

<210> 1

<211> 421

<212> PRT

<213> coronavirus

<400> 1

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Asn Gly Ala Arg Pro Lys Gln Arg Arg Pro Gln Gly Leu Pro Asn Asn
35 40 45

Thr Ala Ser Trp Phe Thr Ala Leu Thr Gln His Gly Lys Glu Glu Leu
50 55 60

Arg Phe Pro Arg Gly Gln Gly Val Pro Ile Asn Thr Asn Ser Gly Pro
65 70 75 80

Asp Asp Gln Ile Gly Tyr Tyr Arg Arg Ala Thr Arg Arg Val Arg Gly
85 90 95

Gly Asp Gly Lys Met Lys Glu Leu Ser Pro Arg Trp Tyr Phe Tyr Tyr
100 105 110

Leu Gly Thr Gly Pro Glu Ala Ser Leu Pro Tyr Gly Ala Asn Lys Glu
115 120 125

Gly Ile Val Trp Val Ala Thr Glu Gly Ala Leu Asn Thr Pro Lys Asp
130 135 140

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His Ile Gly Thr Arg Asn Pro Asn Asn Asn Ala Ala Thr Val Leu Gln
 145 150 155 160
 Leu Pro Gln Gly Thr Thr Leu Pro Lys Gly Phe Tyr Ala Glu Gly Ser
 165 170 175
 Arg Gly Gly Ser Gln Ala Ser Ser Arg Ser Ser Ser Arg Ser Arg Gly
 180 185 190
 Asn Ser Arg Asn Ser Thr Pro Gly Ser Ser Arg Gly Asn Ser Pro Ala
 195 200 205
 Arg Met Ala Ser Gly Gly Gly Glu Thr Ala Leu Ala Leu Leu Leu Leu
 210 215 220
 Asp Arg Leu Asn Gln Leu Glu Ser Lys Val Ser Gly Lys Gly Gln Gln
 225 230 235 240
 Gln Gln Gly Gln Thr Val Thr Lys Lys Ser Ala Ala Glu Ala Ser Lys
 245 250 255
 Lys Pro Arg Gln Lys Arg Thr Ala Thr Lys Gln Tyr Asn Val Thr Gln
 260 265 270
 Ala Phe Gly Arg Arg Gly Pro Glu Gln Thr Gln Gly Asn Phe Gly Asp
 275 280 285
 Gln Asp Leu Ile Arg Gln Gly Thr Asp Tyr Lys His Trp Pro Gln Ile
 290 295 300
 Ala Gln Phe Ala Pro Ser Ala Ser Ala Phe Phe Gly Met Ser Arg Ile
 305 310 315 320
 Gly Met Glu Val Thr Pro Ser Gly Thr Trp Leu Thr Tyr His Gly Ala
 325 330 335
 Ile Lys Leu Asp Asp Lys Asp Pro Gln Phe Lys Asp Asn Val Ile Leu
 340 345 350
 Leu Asn Lys His Ile Asp Ala Tyr Lys Thr Phe Pro Pro Thr Glu Pro
 355 360 365
 Lys Lys Asp Lys Lys Lys Lys Thr Asp Glu Ala Gln Pro Leu Pro Gln
 370 375 380
 Arg Gln Lys Lys Gln Pro Thr Val Thr Leu Leu Pro Ala Ala Asp Met
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Asp Asp Phe Ser Arg Gln Leu Gln Asn Ser Met Ser Gly Ala Ser Ala
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Asp Ser Thr Gln Ala
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<211> 1254

<212> PRT

<213> coronavirus

<300>

<301> Krokhin et al.

<302> Mass Spectrometric Characterization of Proteins from the SARS
 virus: A Preliminary Report

<303> Mol. Cell. Proteomics

<304> 2

<305> 5

<306> 346-356

<307> 2003-05-29

<400> 2

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Thr Ser Ser Met Arg Gly Val Tyr Tyr Pro Asp Glu Ile Phe Arg Ser
 35 40 45

Asp Thr Leu Tyr Leu Thr Gln Asp Leu Phe Leu Pro Phe Tyr Ser Asn
 50 55 60

Val Thr Gly Phe His Thr Ile Asn His Thr Phe Gly Asn Pro Val Ile
 65 70 75 80

Pro Phe Lys Asp Gly Ile Tyr Phe Ala Ala Thr Glu Lys Ser Asn Val
 85 90 95

Val Arg Gly Trp Val Phe Gly Ser Thr Met Asn Asn Lys Ser Gln Ser
 100 105 110

Val Ile Ile Ile Asn Asn Ser Thr Asn Val Val Ile Arg Ala Cys Asn
 115 120 125

Phe Glu Leu Cys Asp Asn Pro Phe Phe Ala Val Ser Lys Pro Met Gly
 130 135 140

Thr Gln Thr His Thr Met Ile Phe Asp Asn Ala Phe Asn Cys Thr Phe

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 Glu Tyr Ile Ser Asp Ala Phe Ser Leu Asp Val Ser Glu Lys Ser Gly
 165 170 175
 Asn Phe Lys His Leu Arg Glu Phe Val Phe Lys Asn Lys Asp Gly Phe
 180 185 190
 Leu Tyr Val Tyr Lys Gly Tyr Gln Pro Ile Asp Val Val Arg Asp Leu
 195 200 205
 Pro Ser Gly Phe Asn Thr Leu Lys Pro Ile Phe Lys Leu Pro Leu Gly
 210 215 220
 Ile Asn Ile Thr Asn Phe Arg Ala Ile Leu Thr Ala Phe Ser Pro Ala
 225 230 235 240
 Gln Asp Ile Trp Gly Thr Ser Ala Ala Ala Tyr Phe Val Gly Tyr Leu
 245 250 255
 Lys Pro Thr Thr Phe Met Leu Lys Tyr Asp Glu Asn Gly Thr Ile Thr
 260 265 270
 Asp Ala Val Asp Cys Ser Gln Asn Pro Leu Ala Glu Leu Lys Cys Ser
 275 280 285
 Val Lys Ser Phe Glu Ile Asp Lys Gly Ile Tyr Gln Thr Ser Asn Phe
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 Arg Val Val Pro Ser Gly Asp Val Val Arg Phe Pro Asn Ile Thr Asn
 305 310 315 320
 Leu Cys Pro Phe Gly Glu Val Phe Asn Ala Thr Lys Phe Pro Ser Val
 325 330 335
 Tyr Ala Trp Glu Arg Lys Lys Ile Ser Asn Cys Val Ala Asp Tyr Ser
 340 345 350
 Val Leu Tyr Asn Ser Thr Phe Phe Ser Thr Phe Lys Cys Tyr Gly Val
 355 360 365
 Ser Ala Thr Lys Leu Asn Asp Leu Cys Phe Ser Asn Val Tyr Ala Asp
 370 375 380
 Ser Phe Val Val Lys Gly Asp Asp Val Arg Gln Ile Ala Pro Gly Gln
 385 390 395 400

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Thr Gly Val Ile Ala Asp Tyr Asn Tyr Lys Leu Pro Asp Asp Phe Met
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 Gly Cys Val Leu Ala Trp Asn Thr Arg Asn Ile Asp Ala Thr Ser Thr
 420 425 430
 Gly Asn Tyr Asn Tyr Lys Tyr Arg Tyr Leu Arg His Gly Lys Leu Arg
 435 440 445
 Pro Phe Glu Arg Asp Ile Ser Asn Val Pro Phe Ser Pro Asp Gly Lys
 450 455 460
 Pro Cys Thr Pro Pro Ala Leu Asn Cys Tyr Trp Pro Leu Asn Asp Tyr
 465 470 475 480
 Gly Phe Tyr Thr Thr Thr Gly Ile Gly Tyr Gln Pro Tyr Arg Val Val
 485 490 495
 Val Leu Ser Phe Glu Leu Leu Asn Ala Pro Ala Thr Val Cys Gly Pro
 500 505 510
 Lys Leu Ser Thr Asp Leu Ile Lys Asn Gln Cys Val Asn Phe Asn Phe
 515 520 525
 Asn Gly Leu Thr Gly Thr Gly Val Leu Thr Pro Ser Ser Lys Arg Phe
 530 535 540
 Gln Pro Phe Gln Gln Phe Gly Arg Asp Val Ser Asp Phe Thr Asp Ser
 545 550 555 560
 Val Arg Asp Pro Lys Thr Ser Glu Ile Leu Asp Ile Ser Pro Cys Ala
 565 570 575
 Phe Gly Gly Val Ser Val Ile Thr Pro Gly Thr Asn Ala Ser Ser Glu
 580 585 590
 Val Ala Val Leu Tyr Gln Asp Val Asn Cys Thr Asp Val Ser Thr Ala
 595 600 605
 Ile His Ala Asp Gln Leu Thr Pro Ala Trp Arg Ile Tyr Ser Thr Gly
 610 615 620
 Asn Asn Val Phe Gln Thr Gln Ala Gly Cys Leu Ile Gly Ala Glu His
 625 630 635 640
 Val Asp Thr Ser Tyr Glu Cys Asp Ile Pro Ile Gly Ala Gly Ile Cys
 645 650 655

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Ala Ser Tyr His Thr Val Ser Leu Leu Arg Ser Thr Ser Gln Lys Ser
 660 665 670
 Ile Val Ala Tyr Thr Met Ser Leu Gly Ala Asp Ser Ser Ile Ala Tyr
 675 680 685
 Ser Asn Asn Thr Ile Ala Ile Pro Thr Asn Phe Ser Ile Ser Ile Thr
 690 695 700
 Thr Glu Val Met Pro Val Ser Met Ala Lys Thr Ser Val Asp Cys Asn
 705 710 715 720
 Met Tyr Ile Cys Gly Asp Ser Thr Glu Cys Ala Asn Leu Leu Leu Gln
 725 730 735
 Tyr Gly Ser Phe Cys Thr Gln Leu Asn Arg Ala Leu Ser Gly Ile Ala
 740 745 750
 Ala Glu Gln Asp Arg Asn Thr Arg Glu Val Phe Ala Gln Val Lys Gln
 755 760 765
 Met Tyr Lys Thr Pro Thr Leu Lys Tyr Phe Gly Gly Phe Asn Phe Ser
 770 775 780
 Gln Ile Leu Pro Asp Pro Leu Lys Pro Thr Lys Arg Ser Phe Ile Glu
 785 790 795 800
 Asp Leu Leu Phe Asn Lys Val Thr Leu Ala Asp Ala Gly Phe Met Lys
 805 810 815
 Gln Tyr Gly Glu Cys Leu Gly Asp Ile Asn Ala Arg Asp Leu Ile Cys
 820 825 830
 Ala Gln Lys Phe Asn Gly Leu Thr Val Leu Pro Pro Leu Leu Thr Asp
 835 840 845
 Asp Met Ile Ala Ala Tyr Thr Ala Ala Leu Val Ser Gly Thr Ala Thr
 850 855 860
 Ala Gly Trp Thr Phe Gly Ala Gly Ala Ala Leu Gln Ile Pro Phe Ala
 865 870 875 880
 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
 885 890 895
 Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
 900 905 910

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Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys
 915 920 925

Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val
 930 935 940

Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp
 945 950 955 960

Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg
 965 970 975

Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln
 980 985 990

Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala Thr
 995 1000 1005

Lys Met Ser Glu Cys Val Leu Gly Gln Ser Lys Arg Val Asp Phe
 1010 1015 1020

Cys Gly Lys Gly Tyr His Leu Met Ser Phe Pro Gln Ala Ala Pro
 1025 1030 1035

His Gly Val Val Phe Leu His Val Thr Tyr Val Pro Ser Gln Glu
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Arg Asn Phe Thr Thr Ala Pro Ala Ile Cys His Glu Gly Lys Ala
 1055 1060 1065

Tyr Phe Pro Arg Glu Gly Val Phe Val Phe Asn Gly Thr Ser Trp
 1070 1075 1080

Phe Ile Thr Gln Arg Asn Phe Phe Ser Pro Gln Ile Ile Thr Thr
 1085 1090 1095

Asp Asn Thr Phe Val Ser Gly Asn Cys Asp Val Val Ile Gly Ile
 1100 1105 1110

Ile Asn Asn Thr Val Tyr Asp Pro Leu Gln Pro Glu Leu Asp Ser
 1115 1120 1125

Phe Lys Glu Glu Leu Asp Lys Tyr Phe Lys Asn His Thr Ser Pro
 1130 1135 1140

Asp Val Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val Val

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1145

1150

Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys Asn
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Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu Gly Lys Tyr Glu
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Gln Tyr Ile Lys Trp Pro Trp Tyr Val Trp Leu Gly Phe Ile Ala
1190 1195 1200

Gly Leu Ile Ala Ile Val Met Val Thr Ile Leu Leu Cys Cys Met
1205 1210 1215

Thr Ser Cys Cys Ser Cys Leu Lys Gly Ala Cys Ser Cys Gly Ser
1220 1225 1230

Cys Cys Lys Phe Asp Glu Asp Asp Ser Glu Pro Val Leu Lys Gly
1235 1240 1245

Val Lys Leu His Tyr Thr
1250